

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

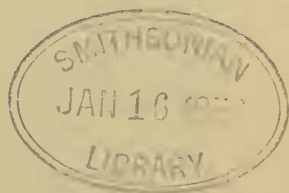
Secretary to the Commission

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OPINION 375

Designation under the Plenary Powers of a type species
in harmony with current usage for the genus *Heterandria*

Agassiz (J.L.R.), 1853 (Class Osteichthyes)



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

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OPINION 375

DESIGNATION UNDER THE PLENARY POWERS OF A TYPE SPECIES IN HARMONY WITH CURRENT USAGE FOR THE GENUS " HETERANDRIA " AGASSIZ (J.L.R.), 1853 (CLASS OSTEICHTHYES)

RULING :—(1) Under the Plenary Powers, (a) all designations or selections of type species for the genus *Heterandria* Agassiz (J.L.R.), 1853 (Class Osteichthyes) made prior to the present Ruling are hereby set aside, and (b) the nominal species *Heterandria formosa* Agassiz (J.L.R.), 1855, is hereby designated to be the type species of the foregoing genus.

(2) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* with the Name Nos. 899 to 901 respectively :—

- (a) *Heterandria* Agassiz (J.L.R.), 1853 (gender : feminine) (type species, by designation under the Plenary Powers under (1)(b) above : *Heterandria formosa* Agassiz (J.L.R.), 1853) ;
- (b) *Gambusia* Poey, 1854 (gender : feminine) (type species, by selection by Jordan & Copeland (1876) ; *Gambusia punctata* Poey, 1854) ;
- (c) *Poeciliopsis* Regan, 1913 (gender : feminine) (type species, by selection by Henn (1916) : *Poecilia presidionis* Jordan & Culver, 1895).

(3) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* with the Name Nos. 520 to 522 respectively :—

- (a) *formosa* Agassiz (J.L.R.), 1855, as published in the combination *Heterandria formosa* (specific name of type species of *Heterandria* Agassiz (J.L.R.), 1853) ;

- (b) *punctata* Poey, 1854, as published in the combination *Gambusia punctata* (specific name of type species of *Gambusia* Poey, 1854) ;
- (c) *presidionis* Jordan & Culver, 1895, as published in the combination *Poecilia presidionis* (specific name of type species of *Poeciliopsis* Regan, 1913).

I.—THE STATEMENT OF THE CASE

The problem involved in the present case was first brought to the notice of the Commission in an informal communication dated 24th December 1948, received from Dr. Reeve M. Bailey (*University of Michigan, Museum of Zoology, Ann Arbor, Michigan, U.S.A.*). On 12th August 1949 Dr. Bailey followed up this communication by submitting an application in regard to this case. At that time the whole resources of the Office of the Commission were being directed to the preparation and publication of the Official Records of the discussions at the Session held by the Commission in Paris in July 1948, and it was not until towards the close of 1950 that it was possible to resume work on the preparation for publication in the *Bulletin of Zoological Nomenclature* of applications relating to individual nomenclatorial problems. In consequence of certain decisions by the Thirteenth International Congress of Zoology, Paris, 1948, regarding the scope and content of *Opinions* rendered by the Commission, certain minor adjustments were required in all applications at that time awaiting attention. Following correspondence between the Secretary and the applicant, the required adjustments in the present case were made in the early part of 1952 and on

29th March of that year the following application was submitted to the Commission :—

Proposed use of the Plenary Powers to designate a type species for the genus “*Heterandria*” Agassiz, 1853 (Class Osteichthyes, Order Cyprinodontida) in harmony with current usage

By REEVE M. BAILEY

(*University of Michigan, Museum of Zoology, Ann Arbor, Michigan, U.S.A.*)

The object of the present application is to invite the International Commission on Zoological Nomenclature to use its Plenary Powers for the purpose of designating as the type species of the genus *Heterandria* Agassiz, 1853 (Class Osteichthyes, Order Cyprinodontida, Family POECILIIDAE) a species in harmony with current usage and thus to prevent the confusion resulting from the transfer of this generic name to a different genus which would be necessary under a strict application of the normal provisions of the *Règles*. The history of this case and the details of the proposals now submitted are given in the following paragraphs.

2. Recent authors have regarded the genus *Heterandria* Agassiz, 1853 (July) (*Amer. J. Sci. Arts* (2) 16 : 135) as comprising only the single species *Heterandria formosa* Agassiz, 1855 (*Amer. J. Sci. Arts* (2) 19 : 136), a tiny poecillid fish from the south-eastern United States. Agassiz gave a definition for this genus but did not cite any nominal species as belonging to it.

3. Up to 1948 it would have been necessary to determine the species to be regarded as having been originally included in this genus (and thus as being eligible for selection as the type species) in accordance with the procedure laid down in the Commission's *Opinion* 46 (1912, *Smithson. Publ.* 2060 : 104—107), but in that year the International Congress of Zoology at its Paris meeting substituted a revised and simplified method for determining the species to be regarded as the type species of a nominal genus established without cited nominal species (1950, *Bull. zool. Nomencl.* 4: 159—160, 346). Under this decision the species first referred to such a genus by a later author is, or are, the only species which are to be treated as having been originally included species and therefore as being eligible for selection as the type species of the genus concerned ; where only one such species was so cited, that species becomes the type species of the genus by monotypy.

4. The first authors to refer any nominal species to the genus *Heterandria* Agassiz were Baird and Girard who in 1853 (September)

(*Proc. Acad. nat. Sci. Philad.* 6 : 390) described four new nominal species as belonging to this genus. These species were *H. affinis* : *H. nobilis* : *H. patruelis* (now regarded as a subjective synonym of *affinis*) ; *H. occidentalis*. Under the ruling referred to in paragraph 3 above, these nominal species are alone eligible for selection as the type species of *Heterandria* Agassiz.

5. Of the four nominal species cited above, the first three are currently considered to be congeneric with *Gambusia punctata* Poey, 1854 (*Mém. Hist. nat. Cuba* 1 : 384), the type species, by selection by Jordan & Copeland (1876, *Bull. Buffalo Soc. nat. Sci.* 3 : 142) of the genus *Gambusia* Poey, 1854 (*Mém. Hist. nat. Cuba* 1 : 382). The fourth species (*H. occidentalis*) is regarded as being congeneric with *Poecilia presidionis* Jordan & Culver, 1895 (*Proc. Calif. Acad. Sci.* (2) 5 : 413), the type species, by selection by Henn (1916, *Ann. Carnegie Mus.* 10 : 119), of the genus *Poeciliopsis* Regan, 1913 (*Proc. zool. Soc. Lond.* 1913 : 996).

6. Thus, the strict application of the ordinary rules in this case would lead to the transfer of the generic name *Heterandria* Agassiz from the genus for which it is always employed (the genus typified by *H. formosa* Agassiz, 1855) either to the genus now known as *Gambusia* Poey, 1854, or to the genus now known as *Poeciliopsis* Regan, 1913. At the same time a new name would be required for the genus to be used for *H. formosa*. It must further be noted that either of the above changes would lead to serious disturbance in nomenclature at the tribe and subfamily name level. (1) The genus *Gambusia* Poey is the type genus of the tribe GAMBUSIINI Hubbs, 1924 (*Misc. Publ. Mus. Zool. Univ. Mich.* 13 : 7). (2) It is the type genus also of the subfamily GAMBUSIINAE Gill, 1893 (*Nat. Acad. Sci.* 6 : 133). (3) The genus *Heterandria* Agassiz is the type genus of the tribe HETERANDRIINI Hubbs, 1924 (*Misc. Publ. Mus. Zool. Univ. Mich.* 13 : 7). (4) The genus *Poeciliopsis* Regan is the type genus of the subfamily POECILOPSINAE Hubbs, 1924 (*ibid.* 13 : 9).

7. The genus *Gambusia* is a rather large genus and is now almost cosmopolitan owing to the widespread introductions which have been made in various areas as a measure of mosquito control. The genus *Poeciliopsis* contains about six species, which are distributed on the Pacific slope from Arizona to Colombia.

8. In view of the widespread confusion which would follow the strict application of the normal rules in this case, it is here proposed that the Commission should intervene by using its Plenary Powers to give valid force to the present practice by which *H. formosa* Agassiz is recognised as the type species of the genus *Heterandria* Agassiz.

The following ichthyologists have been consulted on this problem and support the present application :—

| | |
|------------------------|--|
| Dr. William A. Gosline | Department of Zoology and Entomology, University of Hawaii, Honolulu, Territory of Hawaii. |
| Dr. Carl L. Hubbs | Scripps Institution of Oceanography, La Jolla, California |
| Dr. Robert R. Miller | Museum of Zoology, University of Michigan, Ann Arbor, Michigan |
| Dr. George S. Myers | Natural History Museum, Stanford Uni- versity, California |
| Dr. Luis Rene Rivas | Department of Zoology, University of Miami, Miami, Florida |
| Dr. Leonard P. Schultz | U.S. National Museum, Washington, D.C. |

9. The concrete proposals now submitted are that the International Commission on Zoological Nomenclature should :—

- (1) use its Plenary Powers to set aside any designations or selections of type species for the genus *Heterandria* Agassiz, 1853, made prior to the decision now proposed to be taken and to designate *Heterandria formosa* Agassiz, 1855, to be the type species of the foregoing genus ;
- (2) place the following generic names on the *Official List of Generic Names in Zoology* :—
 - (a) *Heterandria* Agassiz, 1853 (gender of generic name : feminine) (type species, by designation under the Plenary Powers, as proposed in (1) above : *Heterandria formosa* Agassiz, 1855) ;
 - (b) *Gambusia* Poey, 1854 (gender of generic name : feminine) (type species, by selection by Jordan & Copeland (1876) : *Gambusia punctata* Poey, 1854) ;
 - (c) *Poeciliopsis* Regan, 1913 (gender of generic name : feminine) (type species, by selection by Henn (1916) : *Poecilia presidionis* Jordan & Culver, 1895) ;
- (3) place the following trivial names on the *Official List of Specific Trivial Names in Zoology* :—
 - (a) *formosa* Agassiz, 1855, as published in the combination *Heterandria formosa* (trivial name of type species of *Heterandria* Agassiz, 1853) ;

- (b) *punctata* Poey, 1854, as published in the combination *Gambusia punctata* (trivial name of type species of *Gambusia* Poey, 1854) ;
- (c) *presidionis* Jordan & Culver, 1895, as published in the combination *Poecilia presidionis* (trivial name of type species of *Poeciliopsis* Regan, 1913).

II.—THE SUBSEQUENT HISTORY OF THE CASE

2. Registration of the present application : Upon the receipt of Dr. Reeve Bailey's preliminary enquiry, the question of the possible use of the Commission's Plenary Powers for the purpose of designating for the genus *Heterandria* Agassiz a type species in harmony with current usage was allotted the Registered Number Z.N.(S.) 382.

3. Publication of the present application : The present application was sent to the printer on 13th May 1952 and was published on 23rd July 1952 in Part 9 of volume 6 of the *Bulletin of Zoological Nomenclature* (Bailey, 1952, *Bull. zool. Nomencl.* 6 : 263—265).

4. Issue of Public Notices : Under the revised procedure prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 23rd July 1952 (a) in Part 9 of volume 6 of the *Bulletin of Zoological Nomenclature* (the Part in which Dr. Bailey's application was published) and (b) to the other prescribed serial publications. In addition, such Public Notice was given to a number of general zoological serial publications.

5. Support for the present application : The present application was supported at the time of its submission by the six specialists named in paragraph 8 of Dr. Bailey's paper (paragraph 1 of the present *Opinion*). In addition, the issue of the Public Notices specified in paragraph 4 above elicited support for the solution sought in the present case from Dr. K. S. Misra (*Zoological Survey of India, Calcutta*) in a letter dated 22nd January 1953, from which the following is an extract of the portion setting out Dr. Misra's views on this case :—"I am of the opinion that *H. formosa* Ag. should be recognised as the type species of the genus *Heterandria* Agassiz".

6. No objection received to the action proposed : The publication of the present application elicited no objection to the action sought in the present case.

III.—THE DECISION TAKEN BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

7. Issue of Voting Paper V.P.(54)37 : On 24th March 1955, a Voting Paper (V.P.(54)37) was issued in which the Members of the Commission were invited to vote either for, or against, "the proposal relating to the name *Heterandria* Agassiz, 1853, as set out in paragraph 9 on page 265 of volume 6 of the *Bulletin of Zoological Nomenclature*" [i.e. in paragraph 9 of the application reproduced in the first paragraph of the present *Opinion*].

8. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 24th June 1954.

9. Particulars of the Voting on Voting Paper V.P.(54)37 : At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(54)37 was as follows :—

(a) *Affirmative Votes had been given by the following nineteen (19) Commissioners (arranged in the order in which Votes were received) :*

Riley ; Holthuis ; Lemche ; Hering ; Vokes ; Bonnet ;
Dymond ; Esaki ; Boschma ; Sylvester-Bradley ;
Bradley (J.C.) ; Hankó ; do Amaral ; Pearson ; Stoll ;
Hemming ; Cabrera ; Mertens ; Jaczewski ;

(b) *Negative Votes :*

None ;

(c) *Voting Papers not returned :*

None.

10. Declaration of Result of Vote : On 26th June 1954, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(54)37, signed a Certificate that the Votes cast were as set out in paragraph 9 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

11. Preparation of the Ruling given in the present “ Opinion ” : On 27th March 1955, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(54)37.

12. Original References : The following are the original references for the names placed on the *Official Lists* by the Ruling given in the present *Opinion* :—

formosa, *Heterandria*, Agassiz (J.L.R.), 1855, *Amer. J. Sci. Arts* (2) **19** : 136

Gambusia Poey, 1854, *Mém. Hist. nat. Cuba* **1** : 382

Heterandria Agassiz (J.L.R.), 1853, *Amer. J. Sci. Arts* (2) **16** : 135

Poeciliopsis Regan, 1913, *Proc. zool. Soc. Lond.* **1913** : 996

presidionis, *Poecilia*, Jordan & Culver, 1895, *Proc. Calif. Acad. Sci.* (2) **5** : 413

punctata, *Gambusia*, Poey, 1854, *Mem. Hist. nat. Cuba* **1** : 384

13. The following are the references for the selections of type species for the under-mentioned genera specified in the Ruling given in the present *Opinion* :—

For *Gambusia* Poey, 1854 : Jordan & Copeland, 1876, *Bull. Buffalo Soc. nat. Sci.* **3** : 142

For *Poeciliopsis* Regan, 1913 : Henn, 1916, *Ann. Carnegie Mus.* **10** : 119

14. Family-Group Name aspects : The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has been ascertained that an addition, or additions, to the foregoing *Official List* and/or to the corresponding *Official Index of Rejected and Invalid Family-Group Names in Zoology* will need to be made in order to complete the action, which, under the General Directives given to the International Commission by the International Congress of Zoology, is required to be taken in the present case. This question is now being examined on a separate File to which the Registered Number Z.N.(G.) 125 has been allotted.

15. At the time of the submission of the present application the name applicable to the second portion of a binomen was "trivial name". This was altered to "specific name" by the Fourteenth International Congress of Zoology, Copenhagen,

1953, which at the same time made corresponding changes in the titles of the *Official List* and *Official Index* of names of this category. These changes in terminology have been incorporated in the Ruling given in the present *Opinion*.

16. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

17. The present *Opinion* shall be known as *Opinion Three Hundred and Seventy-Five (375)* of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Seventh day of March, Nineteen Hundred and Fifty-Five.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING